



## SEQUENCE LISTING

<110> ZHOU, MING-MING  
AGGARWAL, ANEEL

<120> METHODS OF IDENTIFYING MODULATORS OF BROMODOMAINS

<130> 2459-1-003 CIP

<140> 09/784,553

<141> 2001-02-16

<150> 09/510,314

<151> 2000-02-22

<160> 63

<170> PatentIn version 3.0

<210> 1

<211> 3014

<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Gln	Leu	Arg	Ser	Ala	Pro	Arg	Ala	Lys	Lys	Leu	Glu	Lys	Leu	Gly	Val
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Glu	Lys	Arg	Thr	Leu	Ile	Leu	Thr	His	Phe	Pro	Lys	Phe	Leu	Ser	Met	
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His	Val	Val	Gly	Asn	Ser	Leu	Asn	Gln	Lys	Pro	Asn	Lys	Lys	Ile	Leu	
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				725					730					735		
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			740					745					750			
Lys	Arg	Thr	Glu	Ala	Pro	Gly	Tyr	Tyr	Glu	Val	Ile	Arg	Phe	Pro	Met	
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770						775				780					
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Glu	Tyr	Asn	Ala	Ala	Glu	Ser	Glu	Tyr	Tyr	Lys	Cys	Ala	Asn	Ile	Leu
				805					810					815	
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Pro Met Asp Leu Lys Thr Met Ser Glu Arg Leu Lys Asn Arg Tyr Tyr  
50 55 60  
Val Ser Lys Lys Leu Phe Met Ala Asp Leu Gln Arg Val Phe Thr Asn  
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100 105 110

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Val Thr Arg Lys Leu Phe Val Ala Asp Leu Gln Arg Val Ile Ala Asn  
65 70 75 80  
Cys Arg Glu Tyr Asn Pro Pro Asp Ser Glu Tyr Cys Arg Cys Ala Ser

85

90

95

Ala Leu Glu Lys Phe Phe Tyr Phe Lys Leu Lys Glu Gly Gly  
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&lt;210&gt; 9

&lt;211&gt; 109

&lt;212&gt; PRT

<213> *Tetrahymena thermophila*

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Val Asn Lys Asp Asp Val Pro Asp Tyr Tyr Asp Val Ile Thr Asp Pro  
 35 40 45

Ile Asp Ile Lys Ala Ile Glu Lys Lys Leu Gln Asn Asn Gln Tyr Val  
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Asp Lys Asp Gln Phe Ile Lys Asp Val Lys Arg Ile Phe Thr Asn Ala  
 65 70 75 80

Lys Ile Tyr Asn Gln Pro Asp Thr Ile Tyr Tyr Lys Ala Ala Lys Glu  
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Leu Glu Asp Phe Val Glu Pro Tyr Leu Thr Lys Leu Lys  
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&lt;210&gt; 10

&lt;211&gt; 109

&lt;212&gt; PRT

<213> *Saccharomyces cerevisiae*

&lt;400&gt; 10

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 20 25 30

Val Asn Lys Glu Glu Val Pro Asp Tyr Tyr Asp Phe Ile Lys Glu Pro  
 35 40 45

Met Asp Leu Ser Thr Met Glu Ile Lys Leu Glu Ser Asn Lys Tyr Gln  
 50 55 60

Lys Met Glu Asp Phe Ile Tyr Asp Ala Arg Leu Val Phe Asn Asn Cys  
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Arg Met Tyr Asn Gly Glu Asn Thr Ser Tyr Tyr Lys Tyr Ala Asn Arg  
 85 90 95



Leu Glu Lys Phe Phe Asn Asn Lys Val Lys Glu Ile Pro  
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Pro Val Asp Pro Gln Leu Leu Gly Ile Pro Asp Tyr Phe Asp Ile Val  
35 40 45  
Lys Ser Pro Met Asp Leu Ser Thr Ile Lys Arg Lys Leu Asp Thr Gly  
50 55 60  
Gln Tyr Gln Glu Pro Trp Gln Tyr Val Asp Asp Ile Trp Leu Met Phe  
65 70 75 80  
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100 105 110

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Pro Val Asp Pro Gln Leu Leu Gly Ile Pro Asp Tyr Phe Asp Ile Val  
35 40 45  
Lys Asn Pro Met Asp Leu Ser Thr Ile Lys Arg Lys Leu Asp Thr Gly  
50 55 60  
Gln Tyr Gln Glu Pro Trp Gln Tyr Val Asp Asp Val Trp Leu Met Phe  
65 70 75 80  
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85 90 95

Cys Ser Lys Leu Ala Glu Val Phe Glu Gln Glu Ile Asp Pro Val Met  
100 105 110

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Pro Val Asp Pro Gln Leu Leu Gly Ile Pro Asp Tyr Phe Asp Ile Val  
35 40 45  
Lys Asn Pro Met Asp Leu Ser Thr Ile Lys Arg Lys Leu Asp Thr Gly  
50 55 60  
Gln Tyr Gln Glu Pro Trp Gln Tyr Val Asp Asp Val Arg Leu Met Phe  
65 70 75 80  
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85 90 95  
Cys Ser Lys Leu Ala Glu Val Phe Glu Gln Glu Ile Asp Pro Val Met  
100 105 110

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<213> Caenorhabditis elegans

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Val Asp Ala Lys Leu Leu Asn Ile Pro Asp Tyr His Glu Ile Ile Lys  
35 40 45  
Arg Pro Met Asp Leu Glu Thr Val His Lys Lys Leu Tyr Ala Gly Gln  
50 55 60  
Tyr Gln Asn Ala Gly Gln Phe Cys Asp Asp Ile Trp Leu Met Leu Asp  
65 70 75 80  
Asn Ala Trp Leu Tyr Asn Arg Lys Asn Ser Lys Val Tyr Lys Tyr Gly  
85 90 95  
Leu Lys Leu Ser Glu Met Phe Val Ser Glu Met Asp Pro Val Met

100

105

110

&lt;210&gt; 15

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 15

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Ile	Ile	Asn	Asp	Met	Arg	Asp	Leu	Pro	Asn	Thr	Tyr	Pro	Phe	His	Thr
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Pro	Val	Asn	Ala	Lys	Val	Val	Lys	Asp	Tyr	Tyr	Lys	Ile	Ile	Thr	Arg
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Pro	Met	Asp	Leu	Gln	Thr	Leu	Arg	Glu	Asn	Val	Arg	Lys	Arg	Leu	Tyr
	50					55					60				

Pro	Ser	Arg	Glu	Glu	Phe	Arg	Glu	His	Leu	Glu	Leu	Ile	Val	Lys	Asn
65					70					75					80

Ser	Ala	Thr	Tyr	Asn	Gly	Pro	Lys	His	Ser	Leu	Thr	Gln	Ile	Ser	Gln
				85					90					95	

Ser	Met	Leu	Asp	Leu	Cys	Asp	Glu	Lys	Leu	Lys	Glu	Lys	Glu		
			100					105					110		

&lt;210&gt; 16

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Mesocricetus auratus

&lt;400&gt; 16

Arg	Arg	Arg	Thr	Asp	Pro	Met	Val	Thr	Leu	Ser	Ser	Ile	Leu	Glu	Ser
1				5					10					15	

Ile	Ile	Asn	Asp	Met	Arg	Asp	Leu	Pro	Asn	Thr	Tyr	Pro	Phe	His	Thr
		20						25					30		

Pro	Val	Asn	Ala	Lys	Val	Val	Lys	Asp	Tyr	Tyr	Lys	Ile	Ile	Thr	Arg
		35					40					45			

Pro	Met	Asp	Leu	Gln	Thr	Leu	Arg	Glu	Asn	Val	Arg	Lys	Arg	Leu	Tyr
	50					55					60				

Pro	Ser	Arg	Glu	Glu	Phe	Arg	Glu	His	Leu	Glu	Leu	Ile	Val	Lys	Asn
65					70					75					80

Ser	Ala	Thr	Tyr	Asn	Gly	Pro	Lys	His	Ser	Leu	Thr	Gln	Ile	Ser	Gln
				85					90					95	

Ser	Met	Leu	Asp	Leu	Cys	Asp	Glu	Lys	Leu	Lys	Glu	Lys	Glu		
			100					105					110		

<210> 17  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 17  
 Leu Leu Asp Asp Asp Asp Gln Val Ala Phe Ser Phe Ile Leu Asp Asn  
 1 5 10 15  
 Ile Val Thr Gln Lys Met Met Ala Val Pro Asp Ser Trp Pro Phe His  
 20 25 30  
 His Pro Val Asn Lys Lys Phe Val Pro Asp Tyr Tyr Lys Val Ile Val  
 35 40 45  
 Asn Pro Met Asp Leu Glu Thr Ile Arg Lys Asn Ile Ser Lys His Lys  
 50 55 60  
 Tyr Gln Ser Arg Glu Ser Phe Leu Asp Asp Val Asn Leu Ile Leu Ala  
 65 70 75 80  
 Asn Ser Val Lys Tyr Asn Gly Pro Glu Ser Gln Tyr Thr Lys Thr Ala  
 85 90 95  
 Gln Glu Ile Val Asn Val Cys Tyr Gln Thr Leu Thr Glu Tyr Asp  
 100 105 110

<210> 18  
 <211> 111  
 <212> PRT  
 <213> Mesocricetus auratus

<400> 18  
 Leu Leu Asp Asp Asp Asp Gln Val Ala Phe Ser Phe Ile Leu Asp Asn  
 1 5 10 15  
 Ile Val Thr Gln Lys Met Met Ala Val Pro Asp Ser Trp Pro Phe His  
 20 25 30  
 His Pro Val Asn Lys Lys Phe Val Pro Asp Tyr Tyr Lys Val Ile Val  
 35 40 45  
 Ser Pro Met Asp Leu Glu Thr Ile Arg Lys Asn Ile Ser Lys His Lys  
 50 55 60  
 Tyr Gln Ser Arg Glu Ser Phe Leu Asp Asp Val Asn Leu Ile Leu Ala  
 65 70 75 80  
 Asn Ser Val Lys Tyr Asn Gly Ser Glu Ser Gln Tyr Thr Lys Thr Ala  
 85 90 95  
 Gln Glu Ile Val Asn Val Cys Tyr Gln Thr Leu Thr Glu Tyr Asp  
 100 105 110

<210> 19  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 19  
 Lys Pro Gly Arg Val Thr Asn Gln Leu Gln Tyr Leu His Lys Val Val  
 1 5 10 15  
 Met Lys Ala Leu Trp Lys His Gln Phe Ala Trp Pro Phe Arg Gln Pro  
 20 25 30  
 Val Asp Ala Val Lys Leu Gly Leu Pro Asp Tyr His Lys Ile Ile Lys  
 35 40 45  
 Gln Pro Met Asp Met Gly Thr Ile Lys Arg Arg Leu Glu Asn Asn Tyr  
 50 55 60  
 Tyr Trp Ala Ala Ser Glu Cys Met Gln Asp Phe Asn Thr Met Phe Thr  
 65 70 75 80  
 Asn Cys Tyr Ile Tyr Asn Lys Pro Thr Asp Asp Ile Val Leu Met Ala  
 85 90 95  
 Gln Thr Leu Glu Lys Ile Phe Leu Gln Lys Val Ala Ser Met Pro  
 100 105 110

<210> 20  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 20  
 Lys Pro Gly Arg Lys Thr Asn Gln Leu Gln Tyr Met Gln Asn Val Val  
 1 5 10 15  
 Val Lys Thr Leu Trp Lys His Gln Phe Ala Trp Pro Phe Tyr Gln Pro  
 20 25 30  
 Val Asp Ala Ile Lys Leu Asn Leu Pro Asp Tyr His Lys Ile Ile Lys  
 35 40 45  
 Asn Pro Met Asp Met Gly Thr Ile Lys Lys Arg Leu Glu Asn Asn Tyr  
 50 55 60  
 Tyr Trp Ser Ala Ser Glu Cys Met Gln Asp Phe Asn Thr Met Phe Thr  
 65 70 75 80  
 Asn Cys Tyr Ile Tyr Asn Lys Pro Thr Asp Asp Ile Val Leu Met Ala  
 85 90 95  
 Gln Ala Leu Glu Lys Ile Phe Leu Gln Lys Val Ala Gln Met Pro  
 100 105 110

<210> 21  
 <211> 111  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 21  
 Arg Pro Gly Arg Asn Thr Asn Gln Leu Gln Tyr Leu Ile Lys Thr Val  
 1 5 10 15  
 Met Lys Val Ile Trp Lys His His Phe Ser Trp Pro Phe Gln Gln Pro  
 20 25 30  
 Val Asp Ala Lys Lys Leu Asn Leu Pro Asp Tyr His Lys Ile Ile Lys  
 35 40 45  
 Gln Pro Met Asp Met Gly Thr Ile Lys Lys Arg Leu Glu Asn Asn Tyr  
 50 55 60  
 Tyr Trp Ser Ala Lys Glu Thr Ile Gln Asp Phe Asn Thr Met Phe Asn  
 65 70 75 80  
 Asn Cys Tyr Val Tyr Asn Lys Pro Gly Glu Asp Val Val Val Met Ala  
 85 90 95  
 Gln Thr Leu Glu Lys Val Phe Leu Gln Lys Ile Glu Ser Met Pro  
 100 105 110

<210> 22  
 <211> 109  
 <212> PRT  
 <213> *Saccharomyces cerevisiae*

<400> 22  
 Asn Pro Ile Pro Lys His Gln Gln Lys His Ala Leu Leu Ala Ile Lys  
 1 5 10 15  
 Ala Val Lys Arg Leu Lys Asp Ala Arg Pro Phe Leu Gln Pro Val Asp  
 20 25 30  
 Pro Val Lys Leu Asp Ile Pro Phe Tyr Phe Asn Tyr Ile Lys Arg Pro  
 35 40 45  
 Met Asp Leu Ser Thr Ile Glu Arg Lys Leu Asn Val Gly Ala Tyr Glu  
 50 55 60  
 Val Pro Glu Gln Ile Thr Glu Asp Phe Asn Leu Met Val Asn Asn Ser  
 65 70 75 80  
 Ile Lys Phe Asn Gly Pro Asn Ala Gly Ile Ser Gln Met Ala Arg Asn  
 85 90 95  
 Ile Gln Ala Ser Phe Glu Lys His Met Leu Asn Met Pro  
 100 105

<210> 23

<211> 113  
<212> PRT  
<213> Homo sapiens

<400> 23

Lys	Lys	Gly	Lys	Leu	Ser	Glu	Gln	Leu	Lys	His	Cys	Asn	Gly	Ile	Leu
1				5					10					15	
Lys	Glu	Leu	Leu	Ser	Lys	Lys	His	Ala	Ala	Tyr	Ala	Trp	Pro	Phe	Tyr
			20					25					30		
Lys	Pro	Val	Asp	Ala	Ser	Ala	Leu	Gly	Leu	His	Asp	Tyr	His	Asp	Ile
			35				40					45			
Ile	Lys	His	Pro	Met	Asp	Leu	Ser	Thr	Val	Lys	Arg	Lys	Met	Glu	Asn
	50					55					60				
Arg	Asp	Tyr	Arg	Asp	Ala	Gln	Glu	Phe	Ala	Ala	Asp	Val	Arg	Leu	Met
65					70					75					80
Phe	Ser	Asn	Cys	Tyr	Lys	Tyr	Asn	Pro	Pro	Asp	His	Asp	Val	Val	Ala
				85					90					95	
Met	Ala	Arg	Lys	Leu	Gln	Asp	Val	Phe	Glu	Phe	Arg	Tyr	Ala	Lys	Met
			100					105					110		

Pro

<210> 24  
<211> 113  
<212> PRT  
<213> Homo sapiens

<400> 24

Lys	Lys	Gly	Lys	Leu	Ser	Glu	His	Leu	Arg	Tyr	Cys	Asp	Ser	Ile	Leu
1				5					10					15	
Arg	Glu	Met	Leu	Ser	Lys	Lys	His	Ala	Ala	Tyr	Ala	Trp	Pro	Phe	Tyr
			20					25					30		
Lys	Pro	Val	Asp	Ala	Glu	Ala	Leu	Glu	Leu	His	Asp	Tyr	His	Asp	Ile
			35				40					45			
Ile	Lys	His	Pro	Met	Asp	Leu	Ser	Thr	Val	Lys	Arg	Lys	Met	Asp	Gly
	50					55					60				
Arg	Glu	Tyr	Pro	Asp	Ala	Gln	Gly	Phe	Ala	Ala	Asp	Val	Arg	Leu	Met
65					70					75					80
Phe	Ser	Asn	Cys	Tyr	Lys	Tyr	Asn	Pro	Pro	Asp	His	Glu	Val	Val	Ala
				85					90					95	
Met	Ala	Arg	Lys	Leu	Gln	Asp	Val	Phe	Glu	Met	Arg	Phe	Ala	Lys	Met
			100					105					110		

Pro

<210> 25  
 <211> 113  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 25  
 Asn Lys Glu Lys Leu Ser Asp Ala Leu Lys Ser Cys Asn Glu Ile Leu  
 1 5 10 15  
 Lys Glu Leu Phe Ser Lys Lys His Ser Gly Tyr Ala Trp Pro Phe Tyr  
 20 25 30  
 Lys Pro Val Asp Ala Glu Met Leu Gly Leu His Asp Tyr His Asp Ile  
 35 40 45  
 Ile Lys Lys Pro Met Asp Leu Gly Thr Val Lys Arg Lys Met Asp Asn  
 50 55 60  
 Arg Glu Tyr Lys Ser Ala Pro Glu Phe Ala Ala Asp Val Arg Leu Ile  
 65 70 75 80  
 Phe Thr Asn Cys Tyr Lys Tyr Asn Pro Pro Asp His Asp Val Val Ala  
 85 90 95  
 Met Gly Arg Lys Leu Gln Asp Val Phe Glu Met Arg Tyr Ala Asn Ile  
 100 105 110  
 Pro

<210> 26  
 <211> 113  
 <212> PRT  
 <213> *Saccharomyces cerevisiae*

<400> 26  
 Lys Ser Lys Arg Leu Gln Gln Ala Met Lys Phe Cys Gln Ser Val Leu  
 1 5 10 15  
 Lys Glu Leu Met Ala Lys Lys His Ala Ser Tyr Asn Tyr Pro Phe Leu  
 20 25 30  
 Glu Pro Val Asp Pro Val Ser Met Asn Leu Pro Thr Tyr Phe Asp Tyr  
 35 40 45  
 Val Lys Glu Pro Met Asp Leu Gly Thr Ile Ala Lys Lys Leu Asn Asp  
 50 55 60  
 Trp Gln Tyr Gln Thr Met Glu Asp Phe Glu Arg Glu Val Arg Leu Val  
 65 70 75 80  
 Phe Lys Asn Cys Tyr Thr Phe Asn Pro Asp Gly Thr Ile Val Asn Met  
 85 90 95  
 Met Gly His Arg Leu Glu Glu Val Phe Asn Ser Lys Trp Ala Asp Arg



100

105

110

Pro

&lt;210&gt; 27

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 27

Met Glu Met Gln Leu Thr Pro Phe Leu Ile Leu Leu Arg Lys Thr Leu  
 1 5 10 15

Glu Gln Leu Gln Glu Lys Asp Thr Gly Asn Ile Phe Ser Glu Pro Val  
 20 25 30

Pro Leu Ser Glu Val Pro Asp Tyr Leu Asp His Ile Lys Lys Pro Met  
 35 40 45

Asp Phe Phe Thr Met Lys Gln Asn Leu Glu Ala Tyr Arg Tyr Leu Asn  
 50 55 60

Phe Asp Asp Phe Glu Glu Asp Phe Asn Leu Ile Val Ser Asn Cys Leu  
 65 70 75 80

Lys Tyr Asn Ala Lys Asp Thr Ile Phe Tyr Arg Ala Ala Val Arg Leu  
 85 90 95

Arg Glu Gln Gly Gly Ala Val Val Arg Gln Ala Arg  
 100 105

&lt;210&gt; 28

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 28

Ser Glu Asp Gln Glu Ala Ile Gln Ala Gln Lys Ile Trp Lys Lys Ala  
 1 5 10 15

Ile Met Leu Val Trp Arg Ala Ala Ala Asn His Arg Tyr Ala Asn Val  
 20 25 30

Phe Leu Gln Pro Val Thr Asp Asp Ile Ala Pro Gly Tyr His Ser Ile  
 35 40 45

Val Gln Arg Pro Met Asp Leu Ser Thr Ile Lys Lys Asn Ile Glu Asn  
 50 55 60

Gly Leu Ile Arg Ser Thr Ala Glu Phe Gln Arg Asp Ile Met Leu Met  
 65 70 75 80

Phe Gln Asn Ala Val Met Tyr Asn Ser Ser Asp His Asp Val Tyr His  
 85 90 95

Met Ala Val Glu Met Gln Arg Asp Val Leu Glu Gln Ile Gln Gln Phe  
 100 105 110

Leu

<210> 29  
 <211> 106  
 <212> PRT  
 <213> Gallus gallus

<400> 29  
 Asn Leu Pro Thr Val Asp Pro Ile Ala Val Cys His Glu Leu Tyr Asn  
 1 5 10 15  
 Thr Ile Arg Asp Tyr Lys Asp Glu Gln Gly Arg Leu Leu Cys Glu Leu  
 20 25 30  
 Phe Ile Arg Ala Pro Lys Arg Arg Asn Gln Pro Asp Tyr Tyr Glu Val  
 35 40 45  
 Val Ser Gln Pro Ile Asp Leu Met Lys Ile Gln Gln Lys Leu Lys Met  
 50 55 60  
 Glu Glu Tyr Asp Asp Val Asn Val Leu Thr Ala Asp Phe Gln Leu Leu  
 65 70 75 80  
 Phe Asn Asn Ala Lys Ala Tyr Tyr Lys Pro Asp Ser Pro Glu Tyr Lys  
 85 90 95  
 Ala Ala Cys Lys Leu Trp Glu Leu Tyr Leu  
 100 105

<210> 30  
 <211> 112  
 <212> PRT  
 <213> Gallus gallus

<400> 30  
 Ser Ser Pro Gly Tyr Leu Lys Glu Ile Leu Glu Gln Leu Leu Glu Ala  
 1 5 10 15  
 Val Ala Val Ala Thr Asn Pro Ser Gly Arg Leu Ile Ser Glu Leu Phe  
 20 25 30  
 Gln Lys Leu Pro Ser Lys Val Gln Tyr Pro Asp Tyr Tyr Ala Ile Ile  
 35 40 45  
 Lys Glu Pro Ile Asp Leu Lys Thr Ile Ala Gln Arg Ile Gln Asn Gly  
 50 55 60  
 Thr Tyr Lys Ser Ile His Ala Met Ala Lys Asp Ile Asp Leu Leu Ala  
 65 70 75 80  
 Lys Asn Ala Lys Thr Tyr Asn Glu Pro Gly Ser Gln Val Phe Lys Asp  
 85 90 95

Ala	Asn	Ala	Ile	Lys	Lys	Ile	Phe	Asn	Met	Lys	Lys	Ala	Glu	Ile	Glu
			100					105					110		

<210> 31  
 <211> 112  
 <212> PRT  
 <213> Gallus gallus

<400> 31															
Thr	Ser	Phe	Met	Asp	Thr	Ser	Asn	Pro	Leu	Tyr	Gln	Leu	Tyr	Asp	Thr
1				5					10					15	
Val	Arg	Ser	Cys	Arg	Asn	Asn	Gln	Gly	Gln	Leu	Ile	Ser	Glu	Pro	Phe
			20					25					30		
Phe	Gln	Leu	Pro	Ser	Lys	Lys	Lys	Tyr	Pro	Asp	Tyr	Tyr	Gln	Gln	Ile
		35					40					45			
Lys	Thr	Pro	Ile	Ser	Leu	Gln	Gln	Ile	Arg	Ala	Lys	Leu	Lys	Asn	His
	50					55					60				
Glu	Tyr	Glu	Thr	Leu	Asp	Gln	Leu	Glu	Ala	Asp	Leu	Asn	Leu	Met	Phe
65					70				75						80
Glu	Asn	Ala	Lys	Arg	Tyr	Asn	Val	Pro	Asn	Ser	Ala	Ile	Tyr	Lys	Arg
				85				90						95	
Val	Leu	Lys	Met	Gln	Gln	Val	Met	Gln	Ala	Lys	Lys	Lys	Glu	Leu	Ala
			100					105					110		

<210> 32  
 <211> 113  
 <212> PRT  
 <213> Gallus gallus

<400> 32															
Ser	Lys	Lys	Asn	Met	Arg	Lys	Gln	Arg	Met	Lys	Ile	Leu	Tyr	Asn	Ala
1				5					10					15	
Val	Leu	Glu	Ala	Arg	Glu	Ser	Gly	Thr	Gln	Arg	Arg	Leu	Cys	Asp	Leu
			20					25					30		
Phe	Met	Val	Lys	Pro	Ser	Lys	Lys	Asp	Tyr	Pro	Asp	Tyr	Tyr	Lys	Ile
		35					40					45			
Ile	Leu	Glu	Pro	Met	Asp	Leu	Lys	Met	Ile	Glu	His	Asn	Ile	Arg	Asn
	50					55					60				
Asp	Lys	Tyr	Val	Gly	Glu	Glu	Ala	Met	Ile	Asp	Asp	Met	Lys	Leu	Met
65					70					75					80
Phe	Arg	Asn	Ala	Arg	His	Tyr	Asn	Glu	Glu	Gly	Ser	Gln	Val	Tyr	Asn
				85				90						95	

Asp Ala His Met Leu Glu Lys Ile Leu Lys Glu Lys Arg Lys Glu Leu  
100 105 110

Gly

<210> 33  
<211> 115  
<212> PRT  
<213> Gallus gallus

<400> 33  
Lys Lys Ser Lys Tyr Met Thr Pro Met Gln Gln Lys Leu Asn Glu Val  
1 5 10 15  
Tyr Glu Ala Val Lys Asn Tyr Thr Asp Lys Arg Gly Arg Arg Leu Ser  
20 25 30  
Ala Ile Phe Leu Arg Leu Pro Ser Arg Ser Glu Leu Pro Asp Tyr Tyr  
35 40 45  
Ile Thr Ile Lys Lys Pro Val Asp Met Glu Lys Ile Arg Ser His Met  
50 55 60  
Met Ala Asn Lys Tyr Gln Asp Ile Asp Ser Met Val Glu Asp Phe Val  
65 70 75 80  
Met Met Phe Asn Asn Ala Cys Thr Tyr Asn Glu Pro Glu Ser Leu Ile  
85 90 95  
Tyr Lys Asp Ala Leu Val Leu His Lys Val Leu Leu Glu Thr Arg Arg  
100 105 110  
Glu Ile Glu  
115

<210> 34  
<211> 112  
<212> PRT  
<213> Unknown Organism

<220>  
<223> Description of Unknown Organism: see Jeanmougin et al.,  
Trends in Biochem. Sci. 22:151-153 (1997)

<400> 34  
His Asn Ala Pro Phe Asp Lys Thr Lys Phe Asp Glu Val Leu Glu Ala  
1 5 10 15  
Leu Val Gly Leu Lys Asp Asn Glu Gly Asn Pro Phe Asp Asp Ile Phe  
20 25 30  
Glu Glu Leu Pro Ser Lys Arg Tyr Phe Pro Asp Tyr Tyr Gln Ile Ile  
35 40 45  
Gln Lys Pro Ile Cys Tyr Lys Met Met Arg Asn Lys Ala Lys Thr Gly

50		55		60
Lys Tyr Leu Ser Met Gly Asp Phe Tyr Asp Asp Ile Arg Leu Met Val				
65		70		75
Ser Asn Ala Gln Thr Tyr Asn Met Pro Gly Ser Leu Val Tyr Glu Cys				
	85		90	95
Ser Val Leu Ile Ala Asn Thr Ala Asn Ser Leu Glu Ser Lys Asp Gly				
	100		105	110

<210> 35  
 <211> 113  
 <212> PRT  
 <213> Unknown Organism

<220>  
 <223> Description of Unknown Organism: see Jeanmougin et al.,  
 Trends in Biochem. Sci. 22:151-153 (1997)

<400> 35
Gly Thr Asn Glu Ile Asp Val Pro Lys Val Ile Gln Asn Ile Leu Asp
1 5 10 15
Ala Leu His Glu Glu Lys Asp Glu Gln Gly Arg Phe Leu Ile Asp Ile
20 25 30
Phe Ile Asp Leu Pro Ser Lys Arg Leu Tyr Pro Asp Tyr Tyr Glu Ile
35 40 45
Ile Lys Ser Pro Met Thr Ile Lys Met Leu Glu Lys Arg Phe Lys Lys
50 55 60
Gly Glu Tyr Thr Thr Leu Glu Ser Phe Val Lys Asp Leu Asn Gln Met
65 70 75 80
Phe Ile Asn Ala Lys Thr Tyr Asn Ala Pro Gly Ser Phe Val Tyr Glu
85 90 95
Asp Ala Glu Lys Leu Ser Gln Leu Ser Ser Ser Leu Ile Ser Ser Phe
100 105 110
Ser

<210> 36  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

<400> 36
Gly Thr Asn Glu Ile Asp Val Pro Lys Val Ile Gln Asn Ile Leu Asp
1 5 10 15
Ala Leu His Glu Glu Lys Asp Glu Gln Gly Arg Phe Leu Ile Asp Ile
20 25 30

Phe	Ile	Asp	Leu	Pro	Ser	Lys	Arg	Leu	Tyr	Pro	Asp	Tyr	Tyr	Glu	Ile
		35					40					45			
Ile	Lys	Ser	Pro	Met	Thr	Ile	Lys	Met	Leu	Glu	Lys	Arg	Phe	Lys	Lys
	50					55					60				
Gly	Glu	Tyr	Thr	Thr	Leu	Glu	Ser	Phe	Val	Lys	Asp	Leu	Asn	Gln	Met
65					70					75					80
Phe	Ile	Asn	Ala	Lys	Thr	Tyr	Asn	Ala	Pro	Gly	Ser	Phe	Val	Tyr	Glu
				85					90					95	
Asp	Ala	Glu	Lys	Leu	Ser	Gln	Leu	Ser	Ser	Ser	Leu	Ile	Ser	Ser	Phe
			100					105					110		

Ser

<210> 37  
 <211> 114  
 <212> PRT  
 <213> Homo sapiens

Ser	Pro	Asn	Pro	Pro	Asn	Leu	Thr	Lys	Lys	Met	Lys	Lys	Ile	Val	Asp
1				5					10					15	
Ala	Val	Ile	Lys	Tyr	Lys	Asp	Ser	Ser	Ser	Gly	Arg	Gln	Leu	Ser	Glu
			20				25						30		
Val	Phe	Ile	Gln	Leu	Pro	Ser	Arg	Lys	Glu	Leu	Pro	Glu	Tyr	Tyr	Glu
		35					40					45			
Leu	Ile	Arg	Lys	Pro	Val	Asp	Phe	Lys	Lys	Ile	Lys	Glu	Arg	Ile	Arg
	50					55					60				
Asn	His	Lys	Tyr	Arg	Ser	Leu	Asn	Asp	Leu	Glu	Lys	Asp	Val	Met	Leu
65					70					75					80
Leu	Cys	Gln	Asn	Ala	Gln	Thr	Phe	Asn	Leu	Glu	Gly	Ser	Leu	Ile	Tyr
				85					90					95	
Glu	Asp	Ser	Ile	Val	Leu	Gln	Ser	Val	Phe	Thr	Ser	Val	Arg	Gln	Lys
			100					105					110		

Ile Glu

<210> 38  
 <211> 113  
 <212> PRT  
 <213> Gallus gallus

Ser	Pro	Asn	Pro	Pro	Lys	Leu	Thr	Lys	Gln	Met	Asn	Ala	Ile	Ile	Asp
1				5					10					15	

Thr	Val	Ile	Asn	Tyr	Lys	Asp	Ser	Ser	Gly	Arg	Gln	Leu	Ser	Glu	Val
			20					25					30		
Phe	Ile	Gln	Leu	Pro	Ser	Arg	Lys	Glu	Leu	Pro	Glu	Tyr	Tyr	Glu	Leu
		35					40				45				
Ile	Arg	Lys	Pro	Val	Asp	Phe	Lys	Lys	Ile	Lys	Glu	Arg	Ile	Arg	Asn
	50					55					60				
His	Lys	Tyr	Arg	Ser	Leu	Gly	Asp	Leu	Glu	Lys	Asp	Val	Met	Leu	Leu
65					70					75					80
Cys	His	Asn	Ala	Gln	Thr	Phe	Asn	Leu	Glu	Gly	Ser	Gln	Ile	Tyr	Glu
				85					90					95	
Asp	Ser	Ile	Val	Leu	Gln	Ser	Val	Phe	Lys	Ser	Ala	Arg	Gln	Lys	Ile
			100					105					110		

Ala

<210> 39  
 <211> 114  
 <212> PRT  
 <213> Gallus gallus

<400> 39															
Ser	Pro	Asn	Pro	Pro	Asn	Leu	Thr	Lys	Lys	Met	Lys	Lys	Ile	Val	Asp
1				5					10					15	
Ala	Val	Ile	Lys	Tyr	Lys	Asp	Ser	Ser	Ser	Gly	Arg	Gln	Leu	Ser	Glu
			20					25					30		
Val	Phe	Ile	Gln	Leu	Pro	Ser	Arg	Lys	Glu	Leu	Pro	Glu	Tyr	Tyr	Glu
		35					40					45			
Leu	Ile	Arg	Lys	Pro	Val	Asp	Phe	Lys	Lys	Ile	Lys	Glu	Arg	Ile	Arg
	50					55					60				
Asn	His	Lys	Tyr	Arg	Ser	Leu	Asn	Asp	Leu	Glu	Lys	Asp	Val	Met	Leu
65					70					75					80
Leu	Cys	Gln	Asn	Ala	Gln	Thr	Phe	Asn	Leu	Glu	Val	Ser	Leu	Ile	Tyr
				85					90					95	
Glu	Asp	Ser	Ile	Val	Leu	Gln	Ser	Val	Phe	Thr	Ser	Val	Arg	Gln	Lys
			100					105					110		

Ile Glu

<210> 40  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 40

Ala Lys Leu Ser Pro Ala Asn Gln Arg Lys Cys Glu Arg Val Leu Leu  
1 5 10 15

Ala Leu Phe Cys His Glu Pro Cys Arg Pro Leu His Gln Leu Ala Thr  
20 25 30

Asp Ser Thr Phe Ser Leu Asp Gln Pro Gly Gly Thr Leu Asp Leu Thr  
35 40 45

Leu Ile Arg Ala Arg Leu Gln Glu Lys Leu Ser Pro Pro Tyr Ser Ser  
50 55 60

Pro Gln Glu Phe Ala Gln Asp Val Gly Arg Met Phe Lys Gln Phe Asn  
65 70 75 80

Lys Leu Thr Glu Asp Lys Ala Asp Val Gln Ser Ile Ile Gly Leu Gln  
85 90 95

Arg Phe Phe Glu Thr Arg Met Asn Glu  
100 105

<210> 41

<211> 105

<212> PRT

<213> Mus musculus

<400> 41

Ala Lys Leu Ser Pro Ala Asn Gln Arg Lys Cys Glu Arg Val Leu Leu  
1 5 10 15

Ala Leu Phe Cys His Glu Pro Cys Arg Pro Leu His Gln Leu Ala Thr  
20 25 30

Asp Ser Thr Phe Ser Met Glu Gln Pro Gly Gly Thr Leu Asp Leu Thr  
35 40 45

Leu Ile Arg Ala Arg Leu Gln Glu Lys Leu Ser Pro Pro Tyr Ser Ser  
50 55 60

Pro Gln Glu Phe Ala Gln Asp Val Gly Arg Met Phe Lys Gln Phe Asn  
65 70 75 80

Lys Leu Thr Glu Asp Lys Ala Asp Val Gln Ser Ile Ile Gly Leu Gln  
85 90 95

Arg Phe Phe Glu Thr Arg Met Asn Asp  
100 105

<210> 42

<211> 108

<212> PRT

<213> Mus sp.

<400> 42



Thr	Lys	Leu	Thr	Pro	Ile	Asp	Lys	Arg	Lys	Cys	Glu	Arg	Leu	Leu	Leu
1				5					10					15	
Phe	Leu	Tyr	Cys	His	Glu	Met	Ser	Leu	Ala	Phe	Gln	Asp	Pro	Val	Pro
			20					25					30		
Leu	Thr	Val	Pro	Asp	Tyr	Tyr	Lys	Ile	Ile	Lys	Asn	Pro	Met	Asp	Leu
		35					40					45			
Ser	Thr	Ile	Lys	Lys	Arg	Leu	Gln	Glu	Asp	Tyr	Cys	Met	Tyr	Thr	Lys
	50					55					60				
Pro	Glu	Asp	Phe	Val	Ala	Asp	Phe	Arg	Leu	Ile	Phe	Gln	Asn	Cys	Ala
65					70					75					80
Glu	Phe	Asn	Glu	Pro	Asp	Ser	Glu	Val	Ala	Asn	Ala	Gly	Ile	Lys	Leu
				85					90					95	
Glu	Ser	Tyr	Phe	Glu	Glu	Leu	Leu	Lys	Asn	Leu	Tyr				
			100					105							

<210> 43

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic bromodomain peptide

<220>

<221> MOD\_RES

<222> (1)..(2)

<223> Any amino acid

<220>

<221> MOD\_RES

<222> (4)..(6)

<223> Any amino acid; this range may encompass 2-3 residues

<220>

<221> MOD\_RES

<222> (8)..(15)

<223> Any amino acid; this range may encompass 5-8 residues

<220>

<221> MOD\_RES

<222> (16)

<223> Pro, Lys or His

<220>

<221> MOD\_RES

<222> (17)

<223> Any amino acid

<220>

<221> MOD\_RES

<222> (19)  
<223> Tyr, Phe or His

<220>  
<221> MOD\_RES  
<222> (20)..(24)  
<223> Any amino acid

<220>  
<221> MOD\_RES  
<222> (26)  
<223> Met, Ile or Val

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Xaa Xaa Phe Xaa Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15  
Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa Asp  
20 25

<210> 44  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic bromodomain peptide

<400> 44  
Trp Pro Phe Met Glu Pro Val Lys Arg Thr Glu Ala Pro Gly Tyr Tyr  
1 5 10 15  
Glu Val Ile Arg  
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<210> 45  
<211> 101  
<212> PRT  
<213> Human immunodeficiency virus type 1

<220>  
<223> Tat protein

<400> 45  
Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser  
1 5 10 15  
Gln Pro Lys Thr Ala Ser Asn Asn Cys Tyr Cys Lys Arg Cys Cys Leu  
20 25 30  
His Cys Gln Val Cys Phe Thr Lys Lys Gly Leu Gly Ile Ser Tyr Gly  
35 40 45  
Arg Lys Lys Arg Arg Gln Arg Arg Arg Ala Pro Gln Asp Ser Lys Thr  
50 55 60

His Gln Val Ser Leu Ser Lys Gln Pro Ala Ser Gln Pro Arg Gly Asp  
65 70 75 80

Pro Thr Gly Pro Lys Glu Ser Lys Lys Lys Val Glu Arg Glu Thr Glu  
85 90 95

Thr Asp Pro Glu Asp  
100

<210> 46

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic HIV-1 Tat peptide

<220>

<221> MOD\_RES

<222> (5)..(7)

<223> Any amino acid

<400> 46

Tyr Gly Arg Lys Xaa Xaa Xaa Arg Gln  
1 5

<210> 47

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic HIV-1 Tat peptide

<400> 47

Ser Tyr Gly Arg Lys Lys Arg Arg Gln Arg  
1 5 10

<210> 48

<211> 21

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<223> Synthetic HIV-1 Tat peptide

<220>

<221> MOD\_RES

<222> (2)..(5)

<223> Any amino acid; this range may encompass 2-4 residues

<220>

<221> MOD\_RES

<222> (7)..(10)

<223> Any amino acid; this range may encompass 2-4 residues

<220>

<221> MOD\_RES

<222> (12)..(15)

<223> Any amino acid; this range may encompass 2-4 residues

<220>

<221> MOD\_RES

<222> (17)..(19)

<223> Any amino acid; this range may encompass 1-3 residues

<220>

<221> MOD\_RES

<222> (21)

<223> Ile, Leu, Met or Val

<400> 48

Phe	Xaa	Xaa	Xaa	Xaa	Val	Xaa	Xaa	Xaa	Xaa	Glu	Xaa	Xaa	Xaa	Xaa	Tyr
1				5					10					15	

Xaa	Xaa	Xaa	Val	Xaa
			20	

<210> 49

<211> 62

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic bromodomain peptide

<400> 49

Phe	Met	Glu	Pro	Val	Lys	Arg	Thr	Glu	Ala	Pro	Gly	Tyr	Tyr	Glu	Val
1				5					10					15	

Ile	Arg	Phe	Pro	Met	Asp	Leu	Lys	Thr	Met	Ser	Glu	Arg	Leu	Lys	Asn
			20					25					30		

Arg	Tyr	Tyr	Val	Ser	Lys	Lys	Leu	Phe	Met	Ala	Asp	Leu	Gln	Arg	Val
			35				40					45			

Phe	Thr	Asn	Cys	Lys	Glu	Tyr	Asn	Ala	Ala	Glu	Ser	Glu	Tyr
			50			55					60		

<210> 50

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic HIV-1 Tat peptide

<220>

<221> MOD\_RES

<222> (5)..(5)  
 <223> acetylated lysine

<400> 50  
 Ser Tyr Gly Arg Xaa Lys Arg Arg Gln Arg Cys  
 1 5 10

<210> 51  
 <211> 11  
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<220>  
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<220>  
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 <222> (5)..(5)  
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<400> 51  
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 1 5 10

<210> 52  
 <211> 11  
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<220>  
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<220>  
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 <222> (5)..(5)  
 <223> acetylated lysine

<400> 52  
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 1 5 10

<210> 53  
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 1 5 10

<210> 54  
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 Ser Tyr Gly Arg Xaa Lys Ala Arg Gln Arg Cys  
 1                      5                      10  
  
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 1                      5                      10  
  
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 <400> 56  
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 1                      5                      10  
  
 <210> 57  
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<220>  
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Ser Tyr Gly Arg Lys Xaa Arg Arg Gln Arg Cys  
1 5 10

<210> 58  
<211> 11  
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<220>  
<223> synthetic HIV-1 Tat peptide

<220>  
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<222> (7)..(7)  
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<400> 58  
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1 5 10

<210> 59  
<211> 20  
<212> PRT  
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<220>  
<223> synthetic histone H4 AcK16 peptide

<220>  
<221> MOD\_RES  
<222> (16)..(16)  
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<400> 59  
Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Xaa  
1 5 10 15

Arg His Arg Lys  
20

<210> 60  
<211> 11  
<212> PRT  
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<220>  
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<400> 60  
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1 5 10

<210> 61  
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<220>  
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<400> 61  
His His His His His His  
1 5

<210> 62  
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<220>  
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<220>  
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<223> acetyl lysine

<400> 62  
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1 5 10

<210> 63  
<211> 12  
<212> PRT  
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<220>  
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<220>  
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<222> (7)  
<223> acetyl lysine

<400> 63  
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1 5 10